

AMENDMENTS TO THE SPECIFICATION:

Please amend the paragraph beginning at page 3, line 8, in the specification as follows:

— A particularly ~~desiderable~~ desirable additional characteristic of optical couplers is wavelength tunability, so that the dropped wavelength may be changed, in order to increase the flexibility of networks. The goal of a tuneable coupler is therefore to select one channel (or several channels) in a given incoming input optical signal and transmitting all other channels through the filter, said channel being changeable. —

Please amend the paragraph beginning at page 3, line 19, in the specification as follows:

— Silica on its own may be thermo-optically tuned. However its thermo-optic coefficient dn/dT is of the order of $10^{-5}/^{\circ}\text{C}$ and a change of temperature of 100°C will typically shift the filter wavelength by less than 1 nm. This may restrict the applications where the ~~desiderable~~ desirable tuning range is of several nm. —

Please amend the paragraph beginning at page 22, line 14, in the specification as follows:

— Example 5

A coupler designed to work in the erbium C-band ($\lambda_{\min} = 1530$ nm, $\lambda_{\max} = 1565$ nm) is considered. The two waveguides are vertically stacked and have a square core. In particular the input lower waveguide 1 has core dimensions $4\ \mu\text{m} \times 4\ \mu\text{m}$ (SiO_2 doped with Ge) and effective index $n_{1c}=1.447$, while the output waveguide has core

dimensions $1\text{ }\mu\text{m} \times 1\text{ }\mu\text{m}$ (SiO_xN_y) and effective index $n_{2c}=1.517$. The tuneable cladding is DeSolite™ 3471-1-129 and the other cladding is undoped SiO_2 . A 1 cm-long grating is placed on the output waveguide. This coupler satisfies eq. (V) for the C-band and indeed the simulation plotted in fig. 10 shows a dropped channel at $1.556\text{ }\mu\text{m}$. ~~nm~~. A second spurious channel reflected back into the input waveguide is present at $1.516\text{ }\mu\text{m}$ ~~nm~~ and it is well outside the desired bandwidth. —